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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/762,271 | 01/23/2004 | Chung-Shun Ho | MR957-1452 | 5786 |

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EXAMINER

HAM, SEUNGSOOK

ART UNIT PAPER NUMBER

2817

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,271

Applicant(s)

HO, CHUNG-SHUN

Examiner

Seungsook Ham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Shafer et al. (US '957).

Applicant's Admitted Prior Art (figs. 5 and 6) discloses the same wave filter except the fitting end portion of the metallic holding tube has an annular groove and a leak-stoppage ring flitted onto the annular groove such that the leak-stoppage ring is tightly sandwiched between the cap and the holding tube. Moreover, Applicant's Admitted Prior Art does not show the circuit board substrate being secured to an inner side of the holding tube by means of solder welding, thus the circuit board is grounded (see claim 1).

Shafer et al. (figs. 1 and 2) discloses a similar wave filter device having a metallic holding tube 26 has a fitting end portion with an annular groove 32 so that a leak stoppage ring 30 fitted onto the groove, and the cap 28 and the holding tube 26 are tightly sandwiched by the ring 30. Moreover, Shafer et al. teaches that the circuit board substrate is grounded and secured to the inner side of the holding tube by a solder (see fig. 4b, col. 5, lines 41-63).

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It would have been obvious to one of ordinary skill in the art to provide an annular groove at the fitting end portion of the metallic holding tube and place a leak-stoppage ring on the groove in the device of Applicant's Admitted Prior Art for a tight coupling between the cap and the holding tube, and prevent any moisture or foreign matter entering between the cap and holding tube as taught by Shafer et al. (col. 5, lines 22-28). Moreover, it would have been obvious to one of ordinary skill in the art to ground the circuit board substrate to the holding tube by solder in the device of Applicant's Admitted Prior Art to provide an excellent electrical ground connection as taught by Shafer et al. (col. 3, lines 47-67).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zelenz et al. (US '743) in view of Applicant's Admitted Prior Art.

Zelenz et al. (figs. 3A-4) discloses a wave filter comprising: a circuit board including a substrate 74, 76, an electronic parts 80 on the substrate; the substrate having a connecting head 96b, and a lead respectively secured to two ends 84; a metallic cap 54 having first and second tube-shaped end portions; the cap having a separating part (the portion where potting wafer 95 is located at) disposed between the tube-shaped end portions; the first tube-shaped end portion having an annular groove 62 on an outer side thereof; a leak-stoppage ring 64 fitted onto the annular groove; the second tube-shaped end portion having screw threads on inside 71; a metallic holding tube 52 having a first end portion and a fitting end portion; the first end portion having screw threads on outer side 67 and an insulating ring 96d fitted therein; the substrate of the circuit board being held in the first tube-shaped end portion of the cap with a lead 92

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passing through; the substrate being secured to an inner side of the first tube-shaped end portion of the cap by means of solder such that the circuit board is grounded (col. 6, lines 5-20); the fitting end portion of the holding tube being tightly fitted around the first tube-shaped end portion of the cap (col. 4, lines 55-67), and the connecting head 96b is received in the threaded first end portion 66 of the holding tube.

Zelenz et al is silent as to whether the lead 92 or 84 connecting the ends of the substrate is secured by solder. However, connecting a lead to a substrate by solder is well known in the art. Applicant's Admitted Prior Art also teaches such solder technique (see spec. p. 1, lines 15-20). Therefore, it would have been obvious to one of ordinary skill in the art to connected the lead to the substrate by solder since such design technique is well known in the art as taught by Applicant's Admitted Prior Art as well as it requires only a routine skill in the art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Palinkas (US '525), Chen (US Pat. Appl. Pub. '340), Zennamo, Jr. et al. (US '342, '129 and '496) discloses a wave filter having leak-stoppage ring for tightly fitting inner and outer housings; and


Yoshie et al. (US '087) discloses a wave filter having a lead connected to a circuit board substrate by solder (col. 8, lines 54-59).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seungsook Ham
Primary Examiner
Art Unit 2817

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